

CLAIMS

1. A contents storage system including: a home server apparatus for recording therein contents; and an information supply apparatus for supplying the home server apparatus with section information that shows how the contents are each divided into sections,
 - the information supply apparatus comprising:
 - a storage unit operable to store therein a plurality of pieces of section information corresponding to a plurality of contents; and
 - a supply unit operable to read first section information, which corresponds to a content recorded in the home server apparatus, from the storage unit and supply the home server apparatus with the first section information,
 - the home server apparatus comprising:
 - a contents recording unit operable to acquire and record the content;
 - a receiving unit operable to receive the first section information from the information supply apparatus;
 - a generating unit operable to generate second section information corresponding to the recorded content; and
 - a section information recording unit operable to record therein either the first section information or the second section information, as being in correspondence with the recorded content.

2. A home server apparatus for receiving section information, which shows how contents are each divided into sections, from an information supply apparatus, the home server apparatus comprising:

5 a contents recording unit operable to acquire and record

a content;

a receiving unit operable to receive first section information, which corresponds to the recorded content, from the information supply apparatus;

10 a generating unit operable to generate second section

information corresponding to the recorded content; and

a section information recording unit operable to record thereineither the first section information or the second section information, as being in correspondence with the recorded

15 content.

3. The home server apparatus of Claim 2, wherein

each content is theoretically divided into meaningful sections that are each cohesive in substance, and

20 sections indicated by the first section information are

more close to meaningful sections of the recorded content than sections indicated by the second section information in length.

4. The home server apparatus of Claim 3, wherein

25 the first section information is generated based on amounts of a plurality of types of characteristics detected through analysis of images and audio information contained in the recorded

content, and

the generating unit generates the second section information based on amounts of less types of characteristics than the types of characteristics on which generation of the
5 first section information is based.

5. The home server apparatus of Claim 4, wherein

the generating unit generates the second section information based on amounts of audio detected through analysis
10 of audio information contained in the recorded content.

6. The home server apparatus of Claim 2, wherein

the receiving unit includes:

a requesting sub-unit operable to request the information
15 supply apparatus to supply the first section information by sending identification information for identifying the recorded content to the information supply apparatus; and

a receiving sub-unit unit operable to receive the first section information from the information supply apparatus,
20 wherein

the generating unit generates the second section information only if the information supply apparatus does not supply the home server apparatus with the first section information in response to the requesting, and

25 the section information recording unit records therein the first section information as being in correspondence with the recorded content if the information supply apparatus supplies

the home server apparatus with the first section information, and records therein the second section information as being in correspondence with the recorded content if the information supply apparatus does not supply the home server apparatus with 5 the first section information.

7. The home server apparatus of Claim 6, wherein
the requesting sub-unit further sends criterion information, which is used for judging whether the first section 10 information can be supplied, together with the identification information to the information supply apparatus, and
the section information recording unit records therein the first section information as being in correspondence with the recorded content only if the information supply apparatus 15 judges based on the criterion information that the first section information can be supplied and the receiving sub-unit receives the first section information from the information supply apparatus.

20 8. The home server apparatus of Claim 7, wherein
the criterion information sent by the requesting sub-unit indicates a level of performance of the generating unit in generating the section information.

25 9. The home server apparatus of Claim 6, wherein
each piece of section information indicates each section of each content by a start time of each section, and

the generating unit generates the second section information by determining the start time of each section through analysis of the recorded content.

- 5 10. The home server apparatus of Claim 9 further comprising:
a time correcting unit operable to correct the start time
of each section indicated by the first section information by:
receiving from the information supply apparatus (i) a portion of
audio data of a content identified by the identification
10 information and (ii) a reproduction time for the portion of audio
data, the reproduction time having been measured by a same clock
that has measured start times indicated by the first section
information; calculating a difference between (iii) a reproduction
time for the portion of audio data of the recorded content and
15 (iv) the reproduction time received from the information supply
apparatus; and correcting the start times indicated by the first
section information by the calculated difference.

11. The home server apparatus of Claim 9 further comprising:
20 a selecting unit operable to select one of sections
indicated by a piece of section information that has been recorded
in the section information recording unit in correspondence with
the recorded content; and
a reproducing unit operable to reproduce the recorded
25 content from a start time of the selected section.

12. The home server apparatus of Claim 11, wherein

the section information indicates, for each section, a characteristic image display time being a time at which an image, which is used to determine what each section concerns, is displayed,

- 5 the home server apparatus further comprising:
a presentation unit operable to display, as a list, images that are to be displayed at characteristic image display times indicated by the section information, wherein
the selecting unit selects a section that corresponds to
10 an image that a user selects from the displayed list of images.

13. The home server apparatus of Claim 6, wherein
the information supply apparatus stores a plurality of pieces of section information for each content,
15 the requesting sub-unit further sends selection criterion information, which is used by the information supply apparatus to select a piece of section information, to the information supply apparatus, and
the receiving sub-unit receives a piece of section
20 information that was selected based on the selection criterion information, from the information supply apparatus.

14. The home server apparatus of Claim 13, wherein
the information supply apparatus stores a plurality of pieces of section information for each content, the plurality of pieces of section information respectively corresponding to
25 a plurality of broadcasting areas, and

the selection criterion information indicates a broadcasting area to which the home server apparatus belongs.

15. The home server apparatus of Claim 13, wherein

5 the requesting by the requesting sub-unit is inhibited while the contents recording unit is recording a content, and is executed after the contents recording unit records a content,

10 the generating unit generates third section information while the contents recording unit records a content, the third section information corresponds to sections of the currently recorded content that have already been recorded by the contents recording unit, and

15 the section information recording unit records therein the third section information as being in correspondence with the currently recorded content if the contents recording unit is in the middle of recording the content, and records therein the first section information as being in correspondence with the content if the first section information is supplied after the content is recorded.

20

16. The home server apparatus of Claim 6 further comprising:

 a communication judging unit operable to judge whether a communication with the information supply apparatus is possible, wherein

25 if the communication judging unit judges that a communication with the information supply apparatus is not possible, the requesting by the requesting sub-unit is inhibited,

the generating unit generates the second section information, and the section information recording unit records therein the second section information as being in correspondence with the recorded content.

5

17. The home server apparatus of Claim 6 further comprising:

a request receiving unit operable to receive from another home server apparatus (i) identification information for identifying a predetermined content stored said another home server apparatus, and (ii) criterion information to be used for judging whether a piece of section information for the predetermined content can be supplied;

10 a judging unit operable to judge based on the criterion information whether to supply said another home server apparatus with the piece of section information for the predetermined content; and

15 a supply unit operable to supply said another home server apparatus with the piece of section information for the predetermined content if the judging unit judges positively and the piece of section information for the predetermined content is stored in the section information recording unit, wherein

20 if the judging unit judges positively and the piece of section information for the predetermined content is not stored in the section information recording unit, the generating unit generates the piece of section information for the predetermined content, and the supply unit supplies said another home server apparatus with the piece of section information for the

predetermined content.

18. The home server apparatus of Claim 17, wherein
the criterion information indicates a level of performance

5 of said another home server apparatus, and

the judging unit judges negatively if the level of
performance of said another home server apparatus indicated by
the criterion information is equal to or higher than a level
of performance of the home server apparatus, and judges positively
10 if the level of performance of said another home server apparatus
is lower than the level of performance of the home server apparatus.

19. An information supply apparatus for supplying a home server
apparatus with section information that shows how contents are
15 each divided into sections, the information supply apparatus
comprising:

a storage unit operable to store therein a plurality of
pieces of section information corresponding to a plurality of
contents;

20 a receiving unit operable to receive, from the home server
apparatus, identification information for identifying a
predetermined content stored in the home server apparatus; and

25 a supply unit operable to, if a piece of section information
corresponding to the predetermined content identified by the
received identification information is stored in the storage
unit, read the piece of section information from the storage
unit and supply the home server apparatus with the read piece

of section information.

20. The information supply apparatus of Claim 19 further comprising:

5 a judging unit operable to judge whether to supply the home server apparatus with the piece of section information corresponding to the predetermined content, based on criterion information which is used for the judgment, wherein
the receiving unit further receives the criterion
10 information from the home server apparatus, and
the supply unit supplies the home server apparatus with the piece of section information corresponding to the predetermined content if the judging unit judges positively.

15 21. The information supply apparatus of Claim 20, wherein
the criterion information indicates a level of performance
of the home server apparatus, and

the judging unit judges negatively if the level of
performance indicated by the criterion information is equal to
20 or higher than a level of performance stored in the storage unit,
and judges positively if the level of performance indicated by
the criterion information is lower than the level of performance
stored in the storage unit.

25 22. The information supply apparatus of Claim 19, wherein
the content is distributed by television broadcasting,
the identification information indicates (i) a channel

that is a distribution source of the content and (ii) a broadcast time of the content,

the supply unit reads, from the storage unit, a piece of section information that corresponds to a content identified by the channel and the broadcast time indicated by the identification information, and supplies the home server apparatus with the read piece of section information.

23. An integrated circuit for a home server apparatus that receives section information, which shows how contents are each divided into sections, from an information supply apparatus, the home server apparatus including a storage unit, the integrated circuit comprising:

a recording unit operable to record a content into the storage unit;

a receiving unit operable to receive first section information, which corresponds to the recorded content, from the information supply apparatus;

a generating unit operable to generate second section information corresponding to the recorded content; and

a section information recording unit operable to record either the first section information or the second section information in the storage unit, as being in correspondence with the recorded content.

25

24. A program for causing a computer to execute a process of recording contents and section information that shows how the

contents are each divided into sections, into a storage apparatus, the program comprising:

a recording step for recording a content into the storage apparatus;

5 a receiving step for receiving first section information, which corresponds to the recorded content, from an information supply apparatus for supplying the section information;

a generating step for generating second section information corresponding to the recorded content; and

10 a section information recording step for recording either the first section information or the second section information into the storage apparatus, as being in correspondence with the recorded content.